Study programmes: Master studies - Informatics	
Course name: R388 - Web Development	
Lecturers: Saša Malkov and other lecturers at Department of computer Science	
Status: Optional	
ECTS: 8	
Attendance prerequisites: -	
Course aims: Mastering general and specific knowledge about the development of web applications	
Course outcome: After completion of the course, the student have adopted the elementary concepts and techniques of web applications development. By working in a team project, he trained in some of the contemporary web development techniques and gained practical experience in the field.	

Course content:
 - Theory behind the WWW, the original goals and assumptions. Basic concepts.
 - Web architecture: servers and clients, communication protocols, HTTP.
 - Applicative aspects of the architecture: communication of programs and web servers, CGI protocol and consequences, program, template, hybrid and session approach to web application development.
 - Web application architecture, patterns and styles.
 - The components of the web application architecture: model-view-controller, presentation-abstraction-controller.
 - The Service-Oriented Architecture (SOA) and Web. RESTfull architecture.
 - Working with multimedia content on the web, HTML5.
 - Dynamic HTML, scripting languages, JavaScript, asynchronous communication (AJAX), some important JavaScript libraries.
 - User interface design for the Web.
 - APIs, tools.
 - Databases in web applications.
 - Application and system scalability.
 - Web application security.

Literature:
1. L.Shklar, R.Rosen: Web Application Architecture, JohnWilley & Sons, Ltd, 2003.
2. G.Kappel, B.Proll, S.Reich, W.Retschitzegger: Web Engineering, John Willey & Sons, Ltd, 2006.
3. Vossen, Unleashing Web 2.0 - From Concepts to Creativity, Morgan Kaufmann, 2007
4. Luke Welling, Laura Thomson: PHP и MySQL: развој апликација за веб, Микро књига, 2009.
(The lecturer can choose another relevant current literature)

Number of hours: **5**	Lectures: **2**	Tutorials: **3**	Laboratory: **-**	Research: **-**

Teaching and learning methods: Frontal lectures, group and individual tutorials and exercises.

Assessment (maximal 100 points)			
Course assignments	**points**	**Final exam**	**points**
Lectures	-	Written exam	-
Exercises / Tutorials	-	Oral exam	-
Colloquia	25	Written-oral exam	55
Essay / Project	20 (team project)		